

FIG. 1

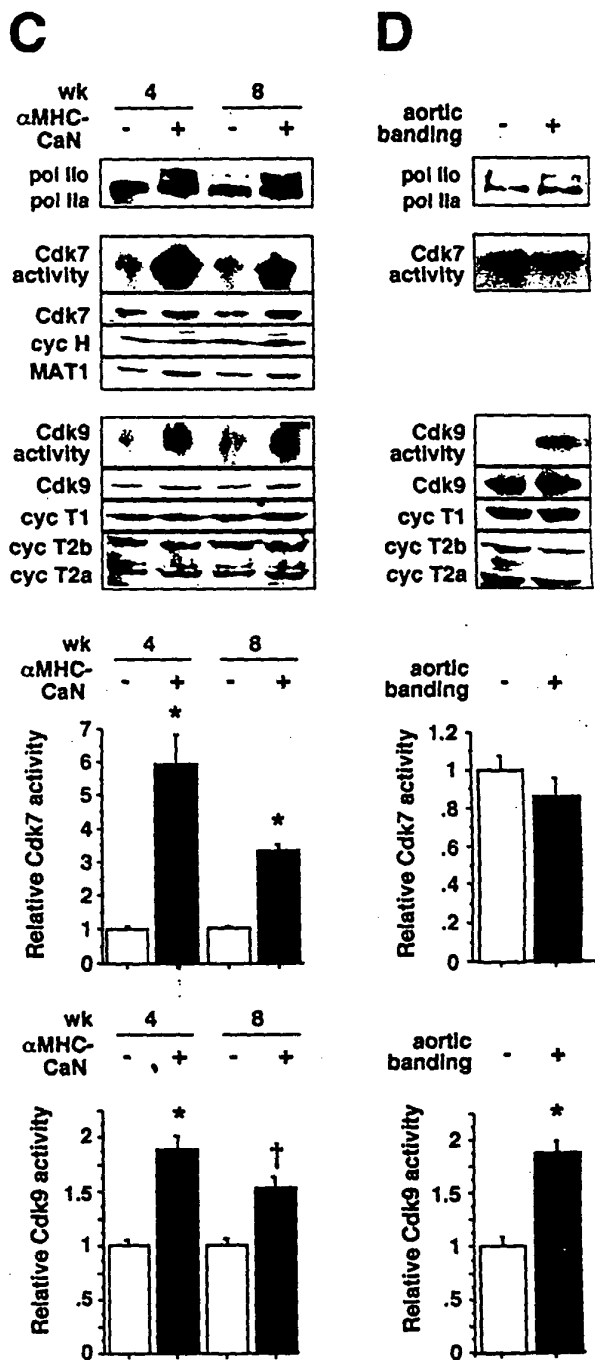


FIG. 1

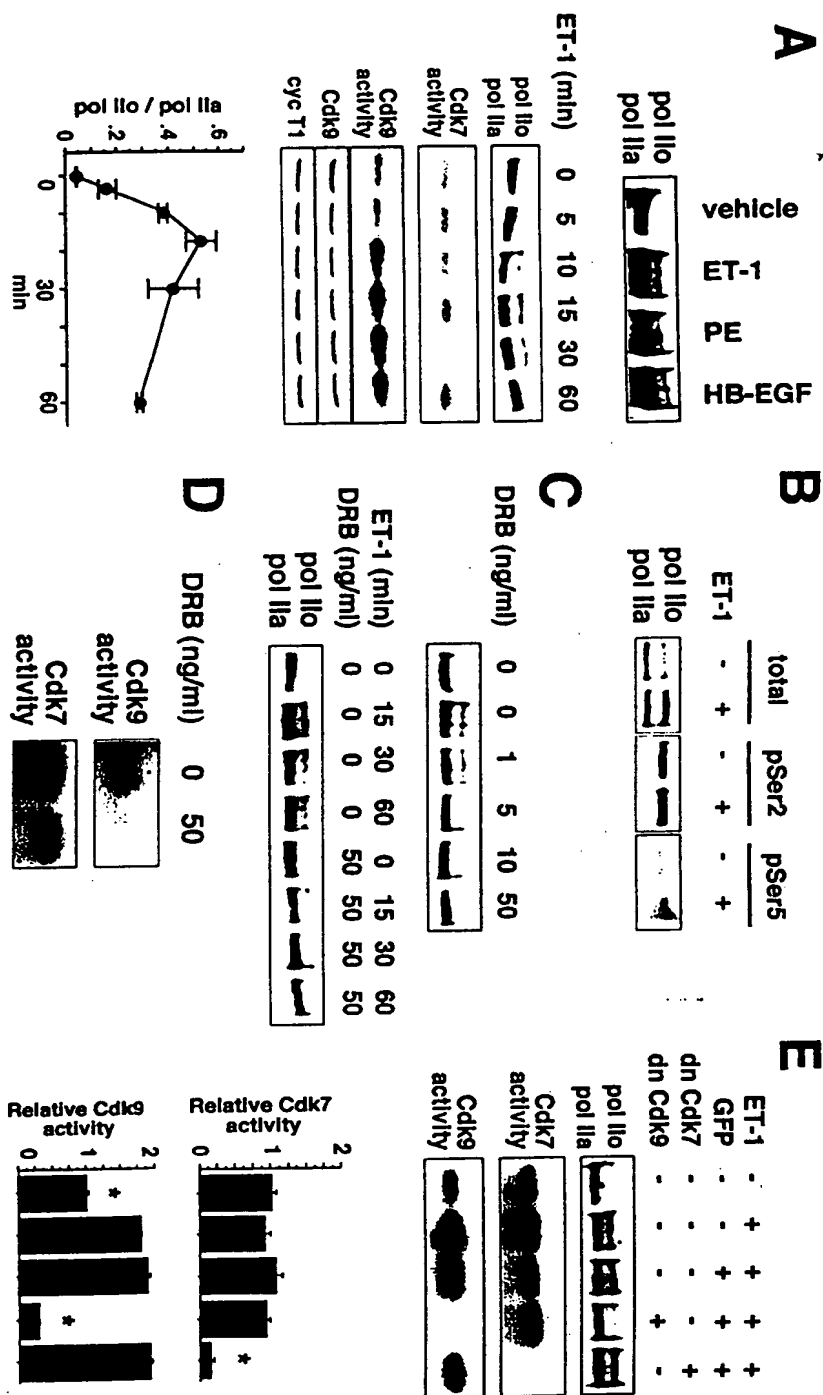
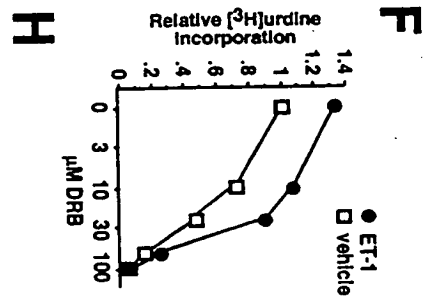
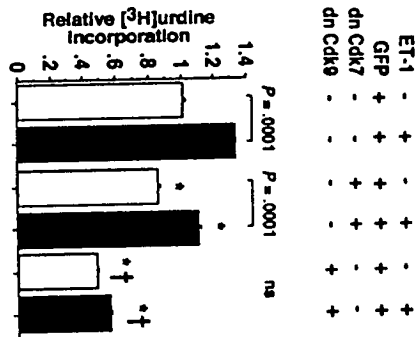


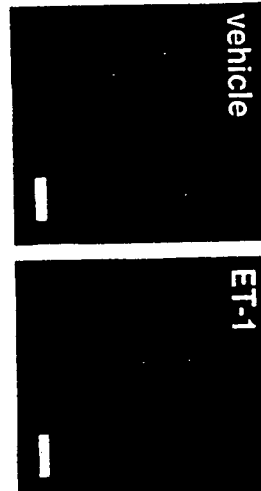
FIG. 2



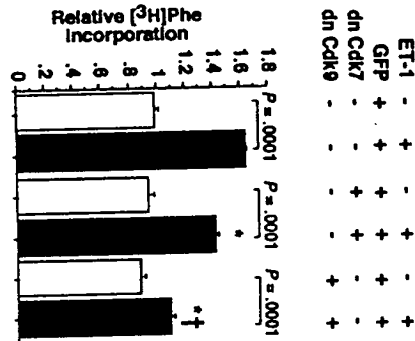
H



G



I



J

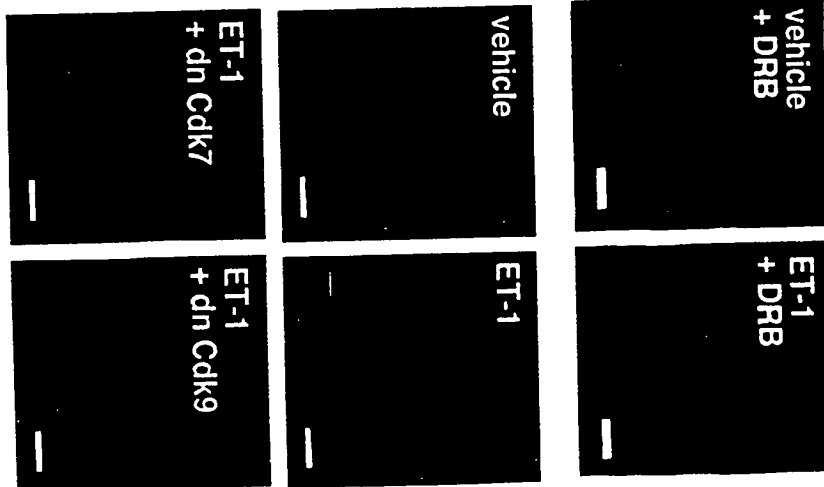


FIG. 2

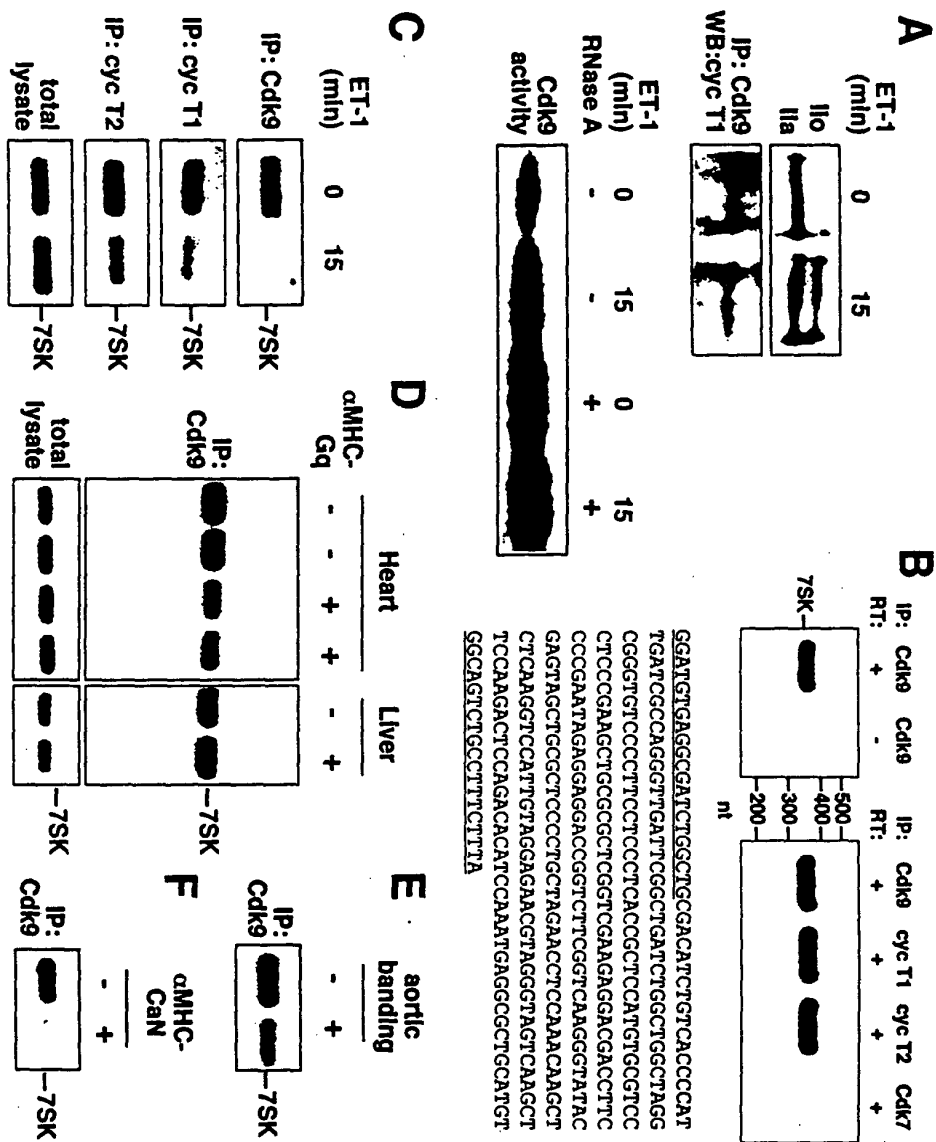
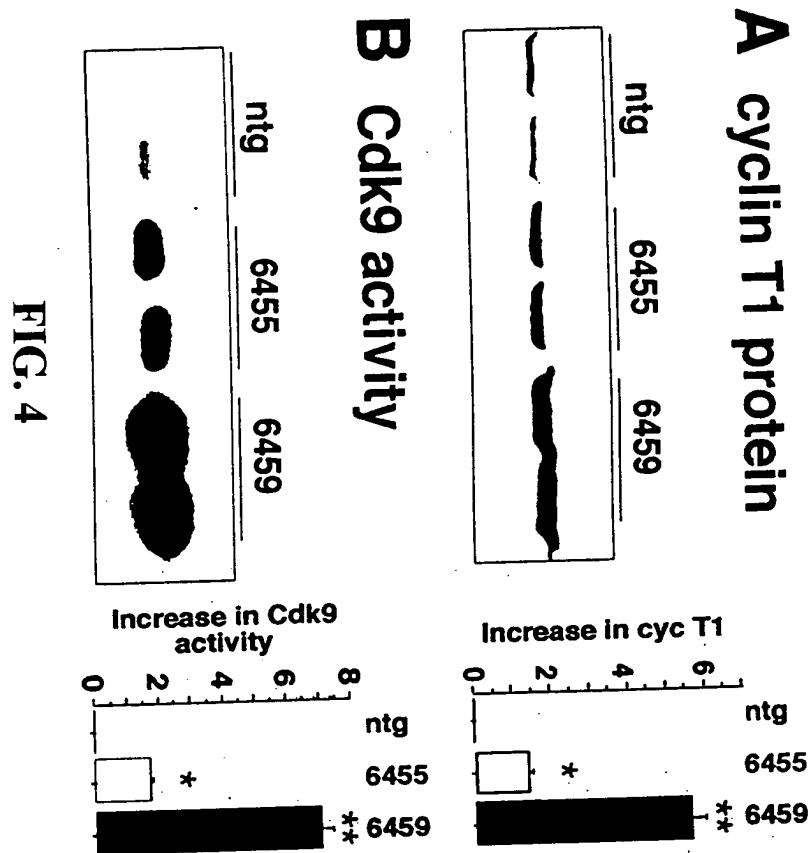
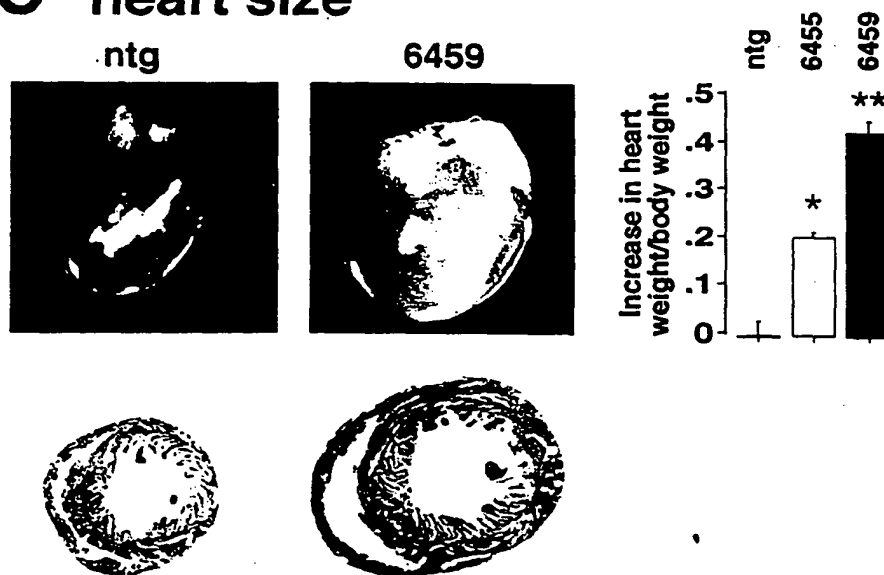


FIG. 3



C heart size



D myocyte size

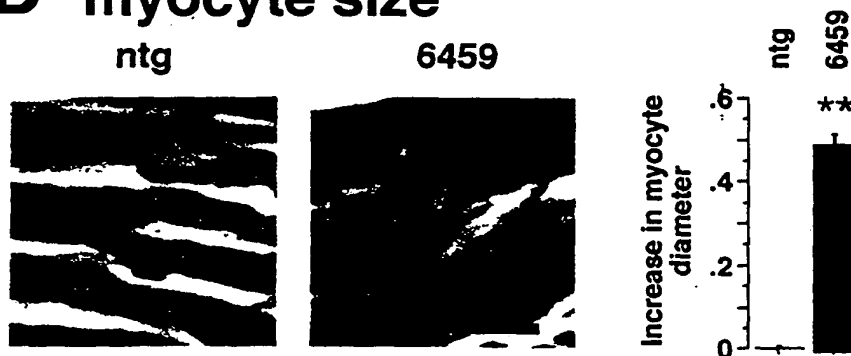


FIG. 4

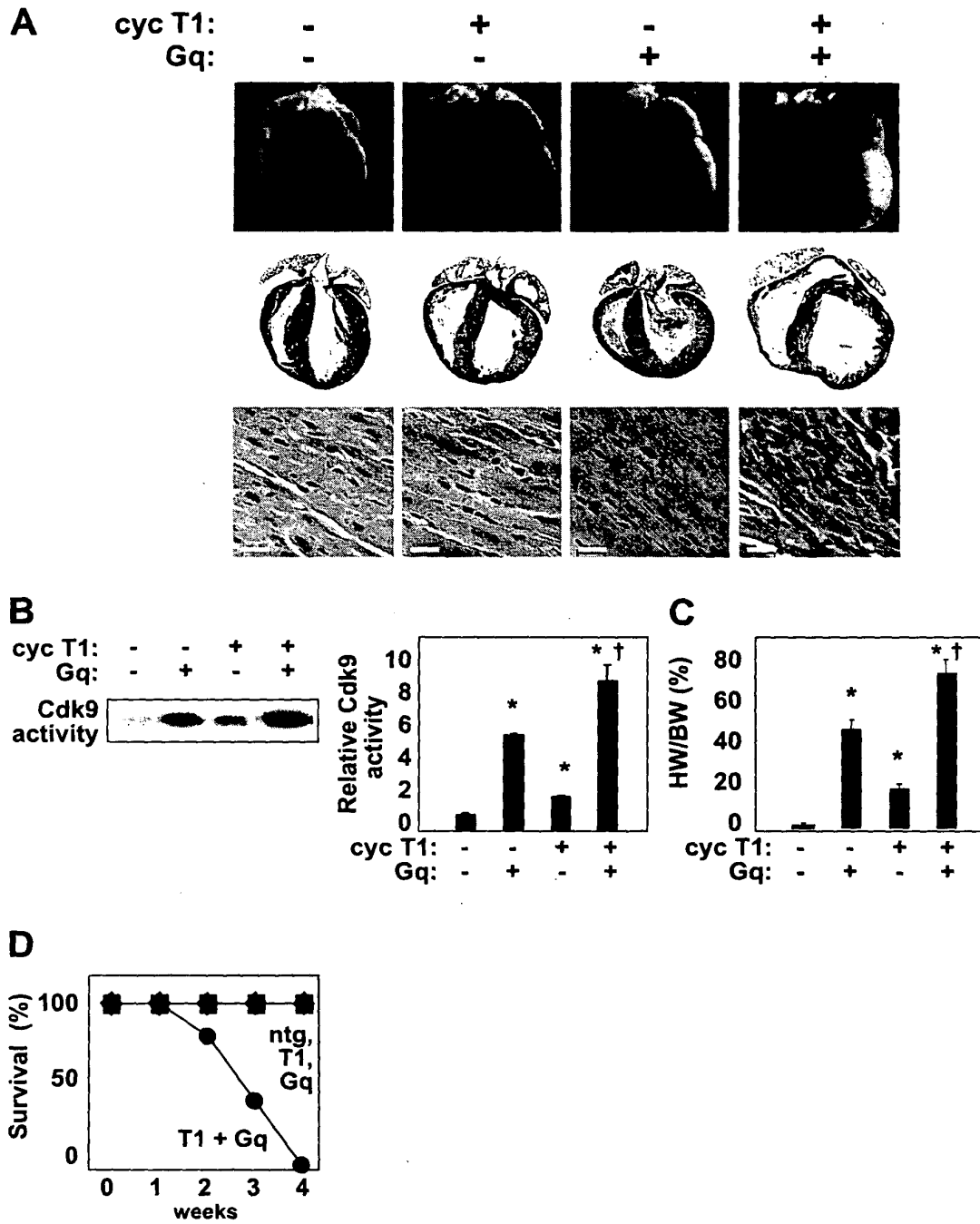


FIG. 5

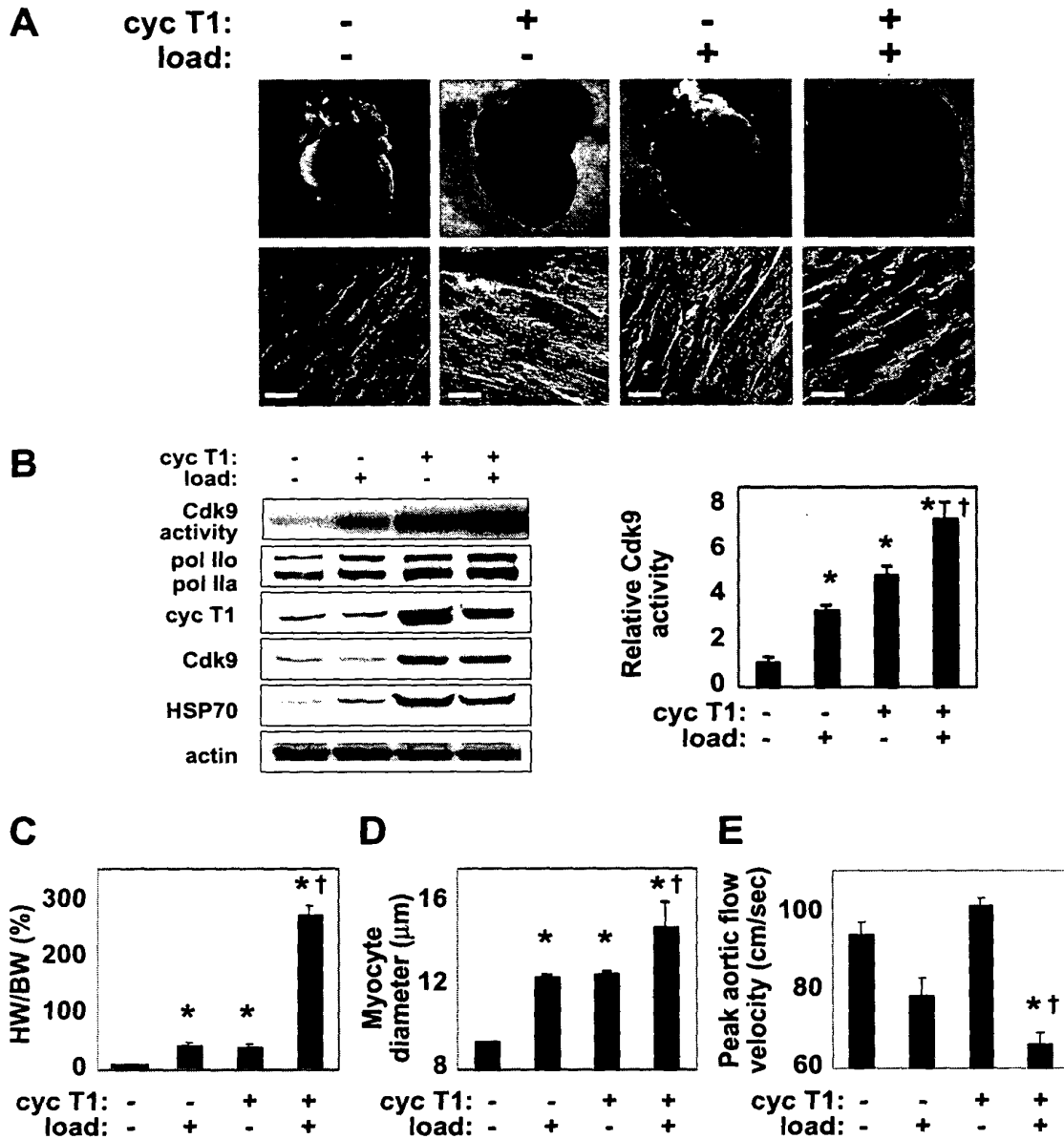


FIG. 6

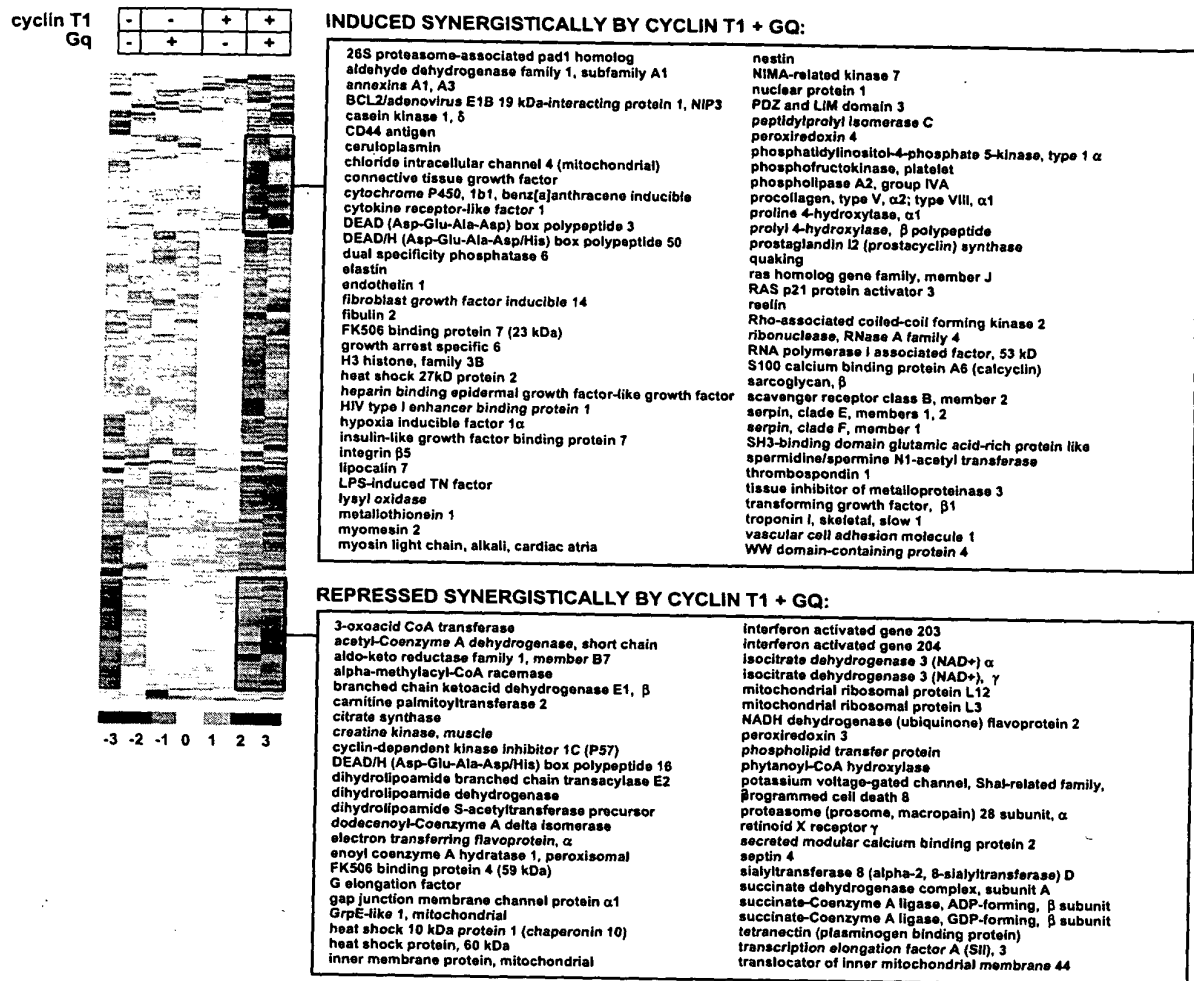


FIG. 7

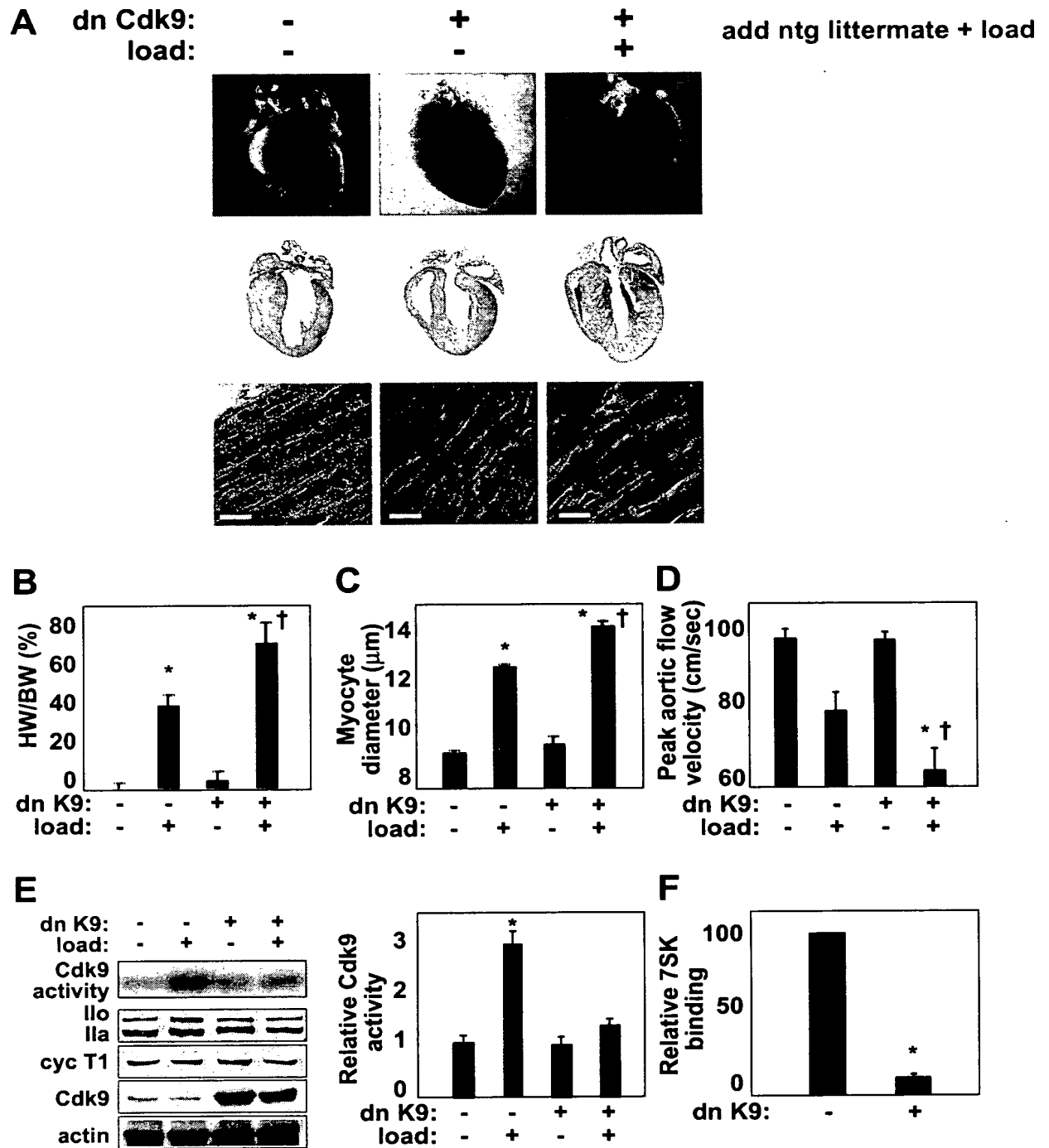


FIG. 8

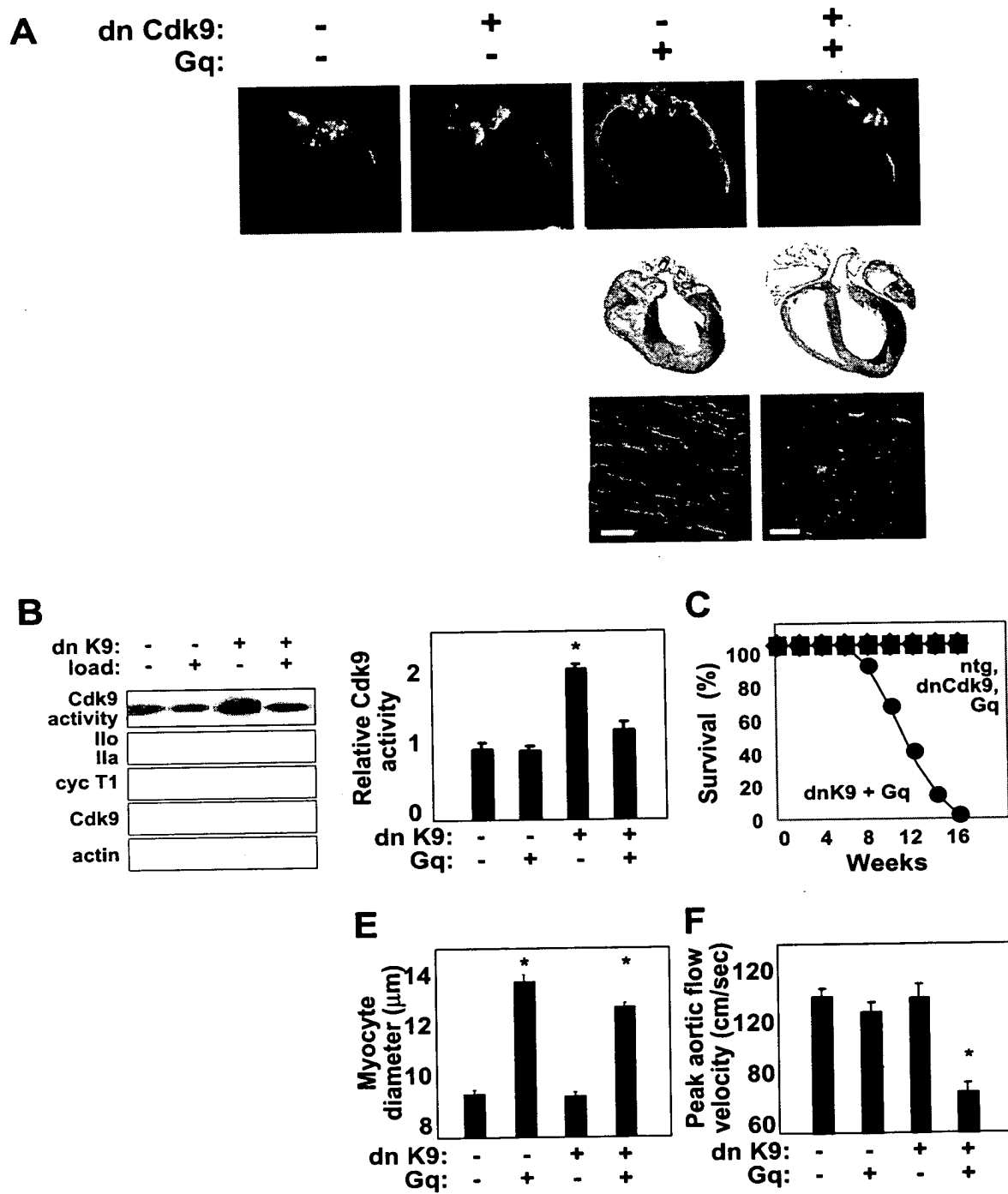


FIG. 9

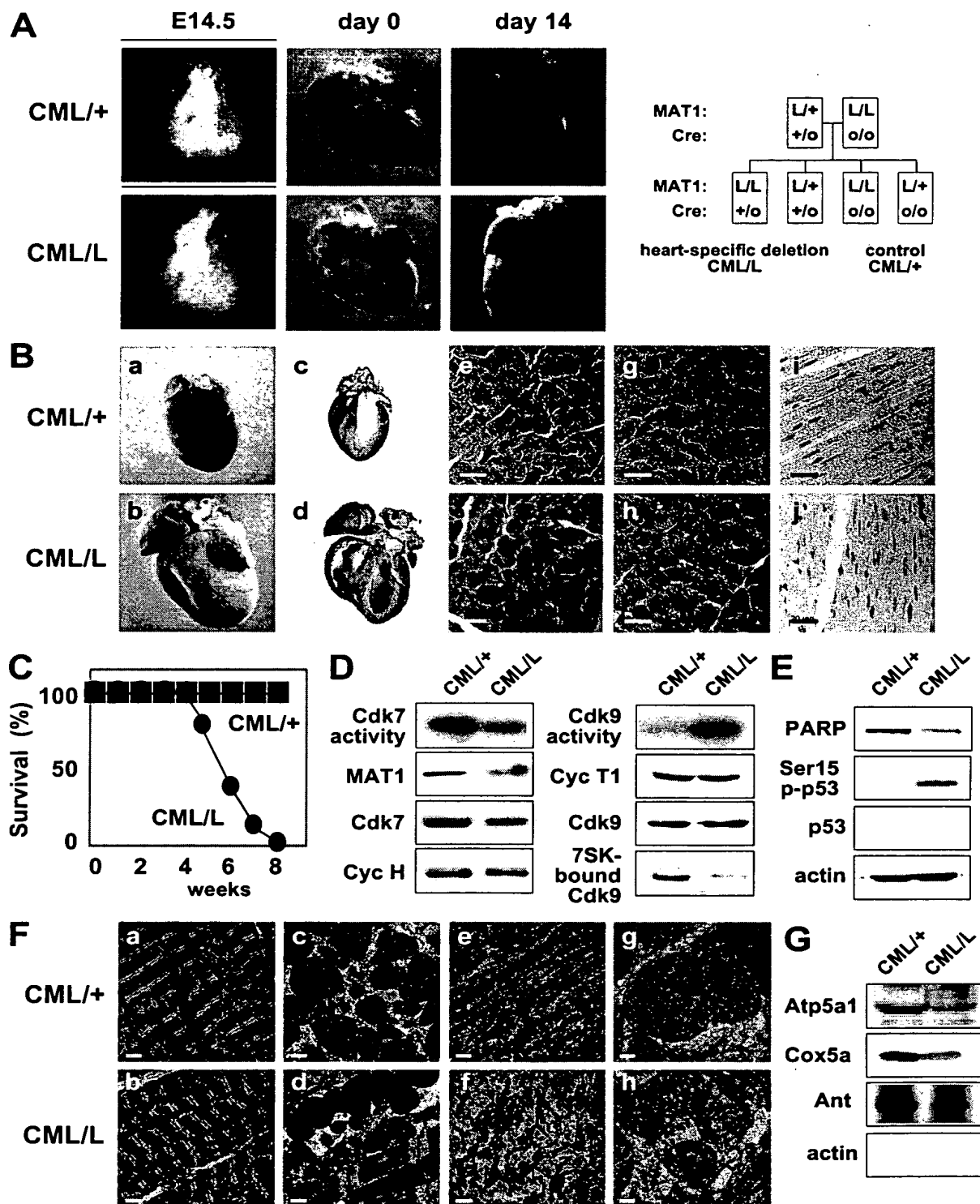


FIG. 10



REPPRESSED AT 4 WK BY CARDIOMYOCYTE-SPECIFIC DELETION OF MAT1:

3-oxoacid CoA transferase
 acetyl-Coenzyme A dehydrogenase, short chain
 BCL2/adenovirus E1B 19 kDa-interacting protein 1, NIP3
 bone morphogenetic protein 7
 branched chain ketoacid dehydrogenase E1, beta
 cadherin 13
 calcium channel, voltage-dependent, T type, alpha 1G
 carnitine deficiency-associated gene expressed in ventricle 1
 catechol-O-methyltransferase
 citrate synthase
 cut-like 1 (Drosophila)
 cytochrome c oxidase, subunit VIIa 1
 DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 16
 deleted in polyposis 1
 dihydrolipoamide branched chain transacylase E2
 dihydrolipoamide dehydrogenase
 dodecenoyl-Coenzyme A delta isomerase
 electron transferring flavoprotein, alpha
 enoyl coenzyme A hydratase 1, peroxisomal
 enoyl Coenzyme A hydratase, short chain, 1, mitochondrial
 fibroblast activation protein
 FK506 binding protein 4 (59 kDa)
 four and a half LIM domains 2
 fumarate hydratase 1
 G elongation factor
 gap junction membrane channel protein alpha 1
 heat shock 10 kDa protein 1 (chaperonin 10)
 heat shock protein, 60 kDa
 histidine rich calcium binding protein
 interferon activated gene 203
 Iroquois related homeobox 3 (Drosophila)
 isocitrate dehydrogenase 3 (NAD+) alpha
 isocitrate dehydrogenase 3 (NAD+), gamma
 isovaleryl coenzyme A dehydrogenase
 kit ligand

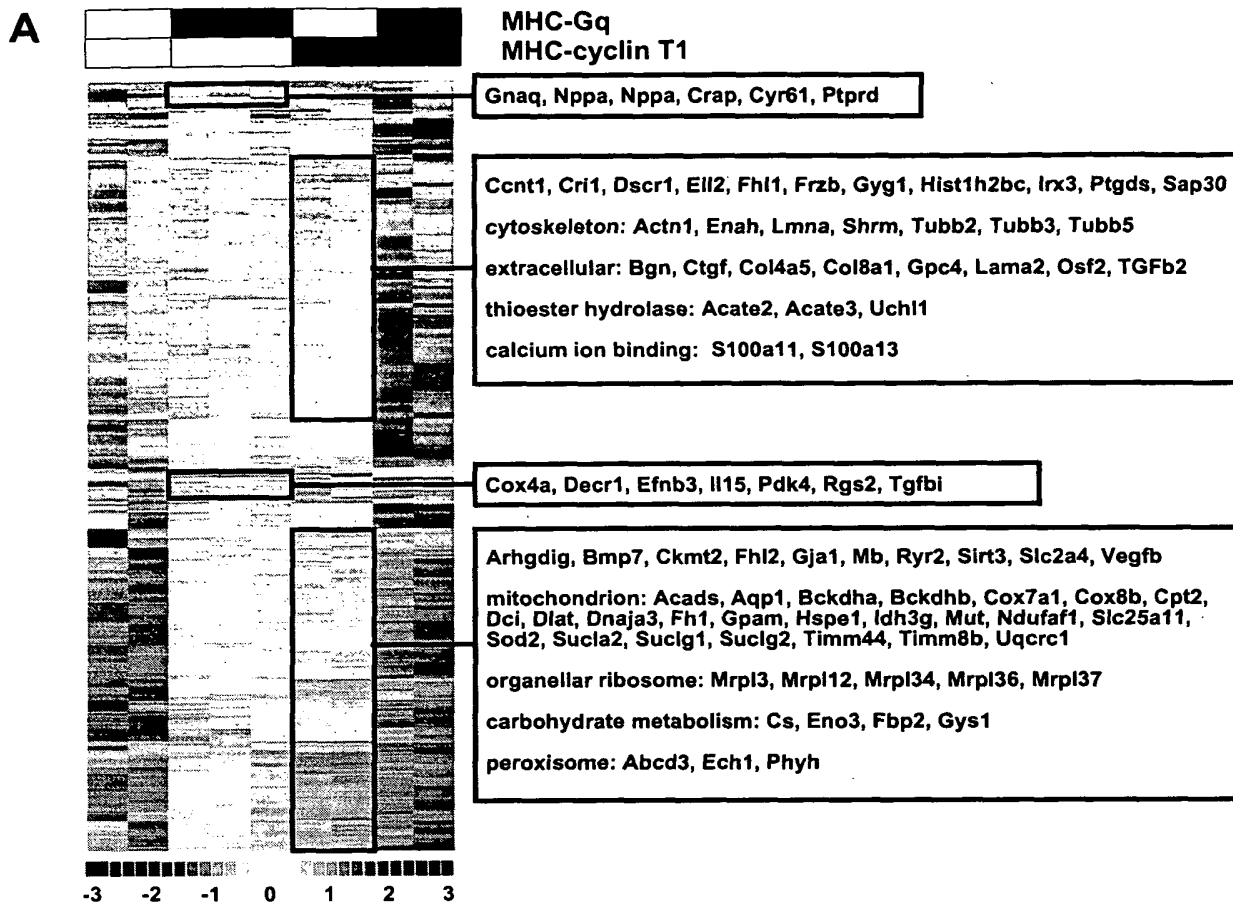
lipin 1
 lipocalin 7
 metal response element binding transcription factor 2
 metallothionein 1
 methylmalonyl-Coenzyme A mutase
 mitochondrial ribosomal protein L12
 mitochondrial ribosomal protein L34
 myeloid leukemia factor 1
 myomesin 2
 NADH dehydrogenase (ubiquinone) flavoprotein 2
 p300/CBP-associated factor
 peroxiredoxin 3
 phosphofructokinase, liver, B-type
 phospholipid transfer protein
 phytanoyl-CoA hydroxylase
 plasma membrane associated protein, S3-12
 potassium voltage-gated channel, Shal-related family, 2
 programmed cell death 8
 prohibitin
 prostaglandin D2 synthase (21 kDa, brain)
 proteasome (prosome, macropain) 28 subunit, alpha
 RAN guanine nucleotide release factor
 retinoid X receptor gamma
 sequestosome 1
 sialyltransferase 8 (alpha-2, 8-sialyltransferase) D
 thiolase/enoyl-Coenzyme A hydratase, beta subunit
 sirutin 3 (silent mating type information regulation 2, homolog) 3
 succinate dehydrogenase complex, subunit A
 succinate-Coenzyme A ligase, GDP-forming, beta subunit
 thyroid hormone responsive SPOT14 homolog (Rattus)
 transcription elongation factor A (SII), 3
 transforming growth factor, beta induced, 68 kDa
 translocator of inner mitochondrial membrane 44
 ubiquinol-cytochrome c reductase core protein 1
 vascular endothelial growth factor B

INDUCED AT 4 WK BY CARDIOMYOCYTE-SPECIFIC DELETION OF MAT1:

26S proteasome-associated pad1 homolog
 5' nucleotidase, ecto
 a disintegrin and metalloproteinase domain 9
 actinin, alpha 1
 acyl-Coenzyme A thioesterase 2, mitochondrial
 acyl-Coenzyme A thioesterase 3, mitochondrial
 aldehyde dehydrogenase family 1, subfamily A1
 annexin A1
 annexin A3
 aradine homolog 2 (Drosophila)
 biglycan
 calcium and integrin binding 1 (calmyrin)
 cardiac morphogenesis
 casein kinase 1, delta
 CD24 antigen
 CD63 antigen
 CD81 antigen
 chaperonin subunit 8 (theta)
 chloride intracellular channel 4 (mitochondrial)
 chondroitin sulfate proteoglycan 2
 coagulation factor II (thrombin) receptor
 connective tissue growth factor
 CREBBP/EP300 inhibitory protein 1
 cyclin-dependent kinase inhibitor 1A (P21)
 cysteine rich intestinal protein
 cysteine rich protein
 cytokine receptor-like factor 1
 cytotoxic T lymphocyte-associated protein 2 alpha
 DEAD/H box polypeptide 50
 deiodinase, iodothyronine, type II
 diaphorase 1 (NADH)
 dihydropyrimidinase-like 3
 elastin
 enabled homolog (Drosophila)
 epidermal growth factor pathway substrate 15
 epithelial membrane protein 1
 fibulin 2
 follistatin-like
 four and a half LIM domains 1
 glutamine synthetase
 glutathione peroxidase 3
 glycogenin 1
 granulin
 GrpE-like 1, mitochondrial
 H3 histone, family 3B
 heat shock 27kD protein 2
 heat shock 70 kDa protein 4
 heparin-binding epidermal growth factor
 histone H3
 HIV-1 Rev binding protein
 hypoxia inducible factor 1, alpha subunit
 Iκ cytokine
 inhibitor of DNA binding 2
 insulin-like growth factor binding protein 7
 insulin-like growth factor I receptor
 integrin alpha 5 (fibronectin receptor alpha)
 integrin beta 4 binding protein
 integrin beta 5
 integrin linked kinase
 interferon-related developmental regulator 1
 lamin A
 low-density lipoprotein receptor-related protein 1
 LPS-induced TN factor
 lysyl oxidase

MAP kinase-interacting serine/threonine kinase 2
 matrix gamma-carboxyglutamate (gla) protein
 moesin
 myosin, heavy polypeptide 7, cardiac muscle, beta
 myotrophin
 nestin
 neuritin
 Niemann Pick type C2
 NS1-associated protein 1-like
 nuclear cap binding protein subunit 2, 20kDa
 nuclear factor Iκ
 nuclear protein 1
 ornithine decarboxylase antizyme inhibitor
 osteoblast specific factor 2 (fascilin I-like)
 paraoxonase 2
 PDZ and LIM domain 3
 phosphofructokinase, platelet
 phosphatidylinositol transfer protein, beta
 polypyrimidine tract binding protein 2
 procollagen C-proteinase enhancer protein
 procollagen, type I, alpha 2
 procollagen, type IV, alpha 5
 procollagen, type V, alpha 2
 procollagen, type VIII, alpha 1
 programmed cell death 6 interacting protein
 prolyl 4-hydroxylase, beta polypeptide
 prostaglandin I2 (prostacyclin) synthase
 protein phosphatase 1A, Mg dependent, alpha
 protein tyrosine phosphatase, non-receptor type 21
 quaking
 ras homolog gene family, member J
 RAS p21 protein activator 3
 reelin
 retinol binding protein 1, cellular
 RNA binding motif protein 4
 RNA polymerase I associated factor, 53 kD
 S100 calcium binding protein A10 (calpactin)
 S100 calcium binding protein A11 (calizzarin)
 S100 calcium binding protein A13
 S100 calcium binding protein A6 (calcyonin)
 secreted modular calcium binding protein 2
 serpin, clade B, member 6
 serpin, clade E, member 1
 serpin, clade E, member 2
 serpin, clade F, member 1
 serine protease inhibitor 6
 serine/threonine kinase 2
 sialyltransferase 10
 sin3 associated polypeptide, 30kD
 Son of sevenless homolog 1, (Drosophila)
 spermidine/spermine N1-acetyl transferase
 sphingosine phosphate lyase 1
 talin
 thrombospondin 1
 tissue factor pathway inhibitor
 tubby like protein 4
 tubulin, alpha 1
 tubulin, beta 2
 ubiquitin 1
 ubiquitin carboxyl-terminal esterase L5
 ubiquitin carboxy-terminal hydrolase L1
 UDP-glucose dehydrogenase
 uridine-cytidine kinase 2

FIG. 11



B

Genotype	Gq	cyclin T1
Common markers of cardiac hypertrophy		
ANP	34.75	6.29
BNP	3.57	1.43
MHC	0.84	0.45
MHC	8.32	1.15
skeletal -actin	6.49	0.99
SERCA2	0.77	0.34
ryanodine receptor	0.68	0.48
phospholamban	0.96	0.30
connexin-43	1.13	0.46
Hsp70	2.58	12.91
Cardiac-specific transcription factors		
Nkx2.5	0.98	0.84
GATA-4	1.06	0.76
MEF2C	1.02	0.82
Tbx5	0.89	0.98
SRF	1.09	1.03
Mitochondrial function		
PPAR coactivator-1	0.83	0.39
nuclear receptor factor-1	1.21	0.74
nuclear receptor factor-2	1.12	0.68
Transcription factor A, mitochondrial	0.96	0.53
PPAR	0.99	1.01
carnitine palmitoyltransferase 1	0.97	0.38
cytochrome C	0.86	0.5
cytochrome C oxidase Va (H)	1.03	0.74
cytochrome C oxidase Via (H)	1.13	0.31
ATP synthase c	1.09	0.40
ATP synthase	0.82	0.44
adenosine nucleotide translocator-1	0.94	0.61
Sod2	0.75	0.39

FIG. 12

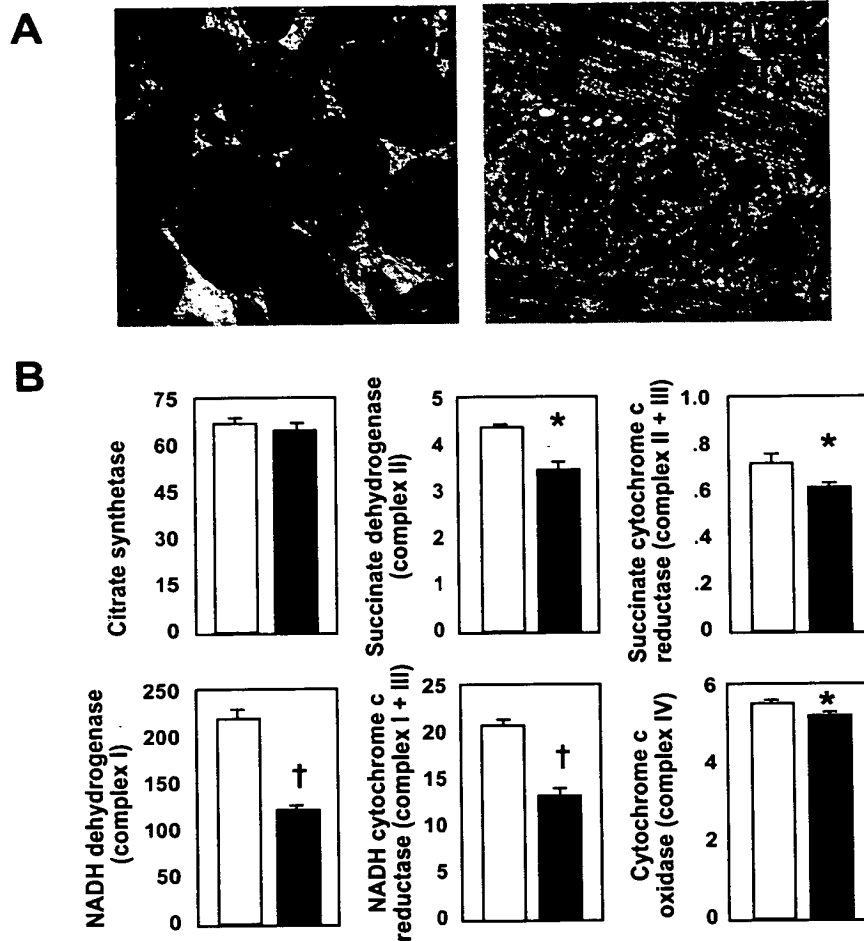
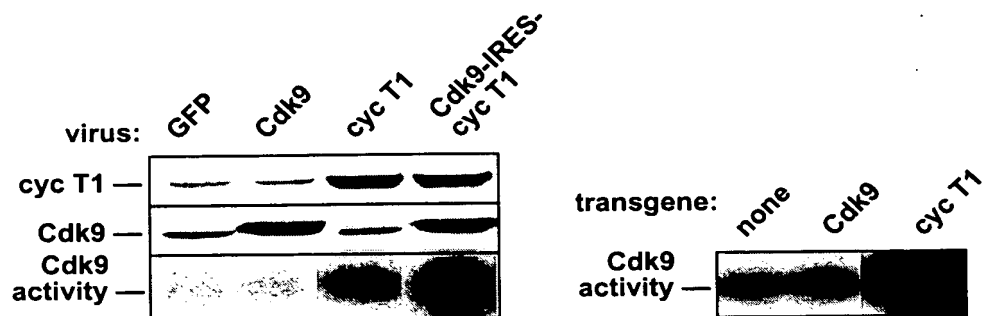


FIG. 13

A



B

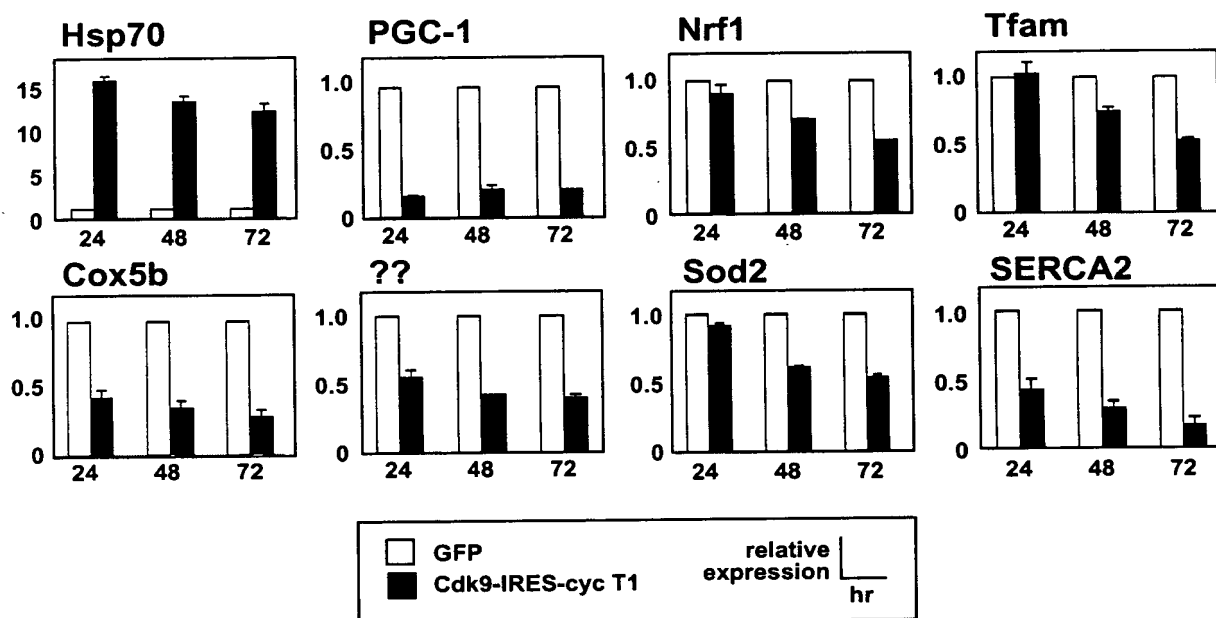


FIG. 14

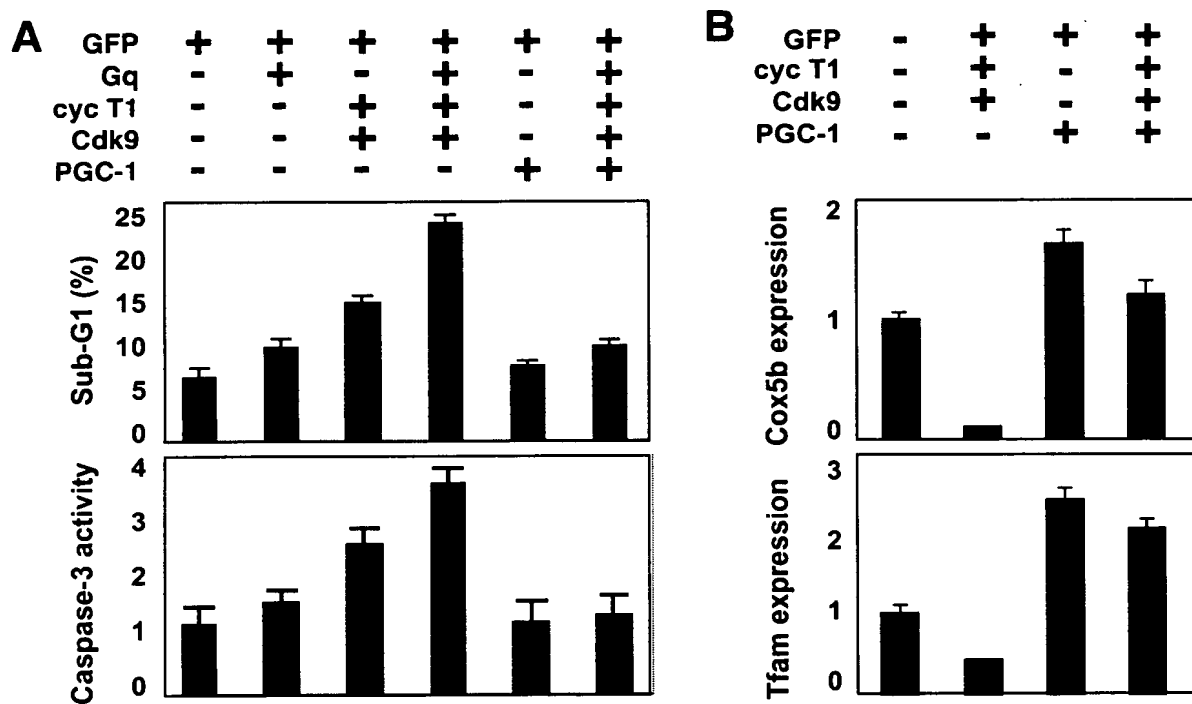


FIG. 15